Claims

[c1] What is claimed is:

1.A method for displaying an electronic document on a digital handheld device, the digital handheld device comprising a screen on which to view an electronic document, the screen having a plurality of pixels and having a width in pixels and a height in pixels, the method comprising:

providing an original document comprising a plurality of pixels, and a having a width in pixels and a height in pixels;

calculating a reduction ratio equal to a ratio of the original document width to the digital handheld device screen width;

processing color values of a two dimensional array of pixels of the original document;

building a reduced document comprising a plurality of pixels, and having a width in pixels equal to the width of the original document divided by the reduction ratio and a height in pixels equal to the height of the original document divided by the reduction ratio, a color value of each pixel of the reduced document determined by said processing; and

displaying the reduced electronic document on the digital handheld device screen.

[c2] 2.The method of claim 1 further comprising rounding the reduction ratio up to a nearest integer.

[c3] 3.The method of claim 2 wherein the array of pixels comprises:

an origin;

a width in pixels having a value equal to or less than the reduction ratio; and

a height in pixels having a value equal to or less than the reduction ratio.

[c4] 4.The method of claim 3 wherein the origin of the array of pixels is located at an x coordinate of a pixel of the original document that is equal to an x coordinate of a pixel in the reduced document multiplied by the reduction ratio.

[c5] 5.The method of claim 4 wherein the origin of the array of pixels is located at a y coordinate of a pixel of the original document that is equal to a y coordinate of the pixel in the reduced document multiplied by the reduction ratio.

[c6] 6.The method of claim 5 wherein each pixel of the original document is used in exactly one array of pixels.

[c7] 7.The method of claim 1 further comprising displaying a portion of the original document on the digital handheld device screen when a user selects a region of the reduced document.

[c8] 8.The method of claim 1 wherein the color values of the pixels are RGB color values.

[c9] 9.The method of claim 1 wherein the original electronic document is a web page.

[c10] 10.The method of claim 1 further providing a memory in which the original document and the reduced document can be stored.

[c11] 11.The method of claim 1 wherein the handheld device is a personal digital assistant (PDA), a cellular phone, or a tablet PC.

[c12] 12.The method of claim 1 wherein the original document width is greater than the digital handheld device screen width.

[c13] 13.The method of claim 1 wherein the processing of the color values of the two dimensional array of pixels comprises calculating a weighted arithmetic mean of the color values of the two dimensional array of pixels.

[c14] 14.The method of claim 1 wherein the processing of the color values of the two dimensional array of pixels comprises taking a median value of the color values of the two dimensional array of pixels.

[c15] 15.The method of claim 1 wherein the processing of the color values of the two dimensional array of pixels comprises determining a numerical mode of the color values of the two dimensional array of pixels.